

IGSM2 Model Interface, Data Analysis, and Storage Application (MIDAS)

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MIDAS Development Steps

- ✓ Read and Write IGSM2 Pass 1 Input Files
- ✓ Provide Graphical Depiction of Model Structure
- ✓ Read IGSM2 Output Files
- ✓ Provide Graphical Outputs
- ✓ Show Comparative Results
- ✓ Read and Write Pass 2 Input Files
- ✓ Run Model

Enhancement to DMS

GWDMS
Database Edit Print Model Options Window Help

DMS Purveyors
NORTHEDGE WATER DISTRICT DMS Model Well ID: 22 State Well ID: 09N/05E-12B01

NORTHEDGE WATER DISTRICT - Well Inventory

Well Location Well Construction Pump/Motor Info Geo-Aqui Info Wellhead Protection
GW Levels GW Extraction Surface Water Well Injection Water Quality
Well Images

Unique DMS Well ID

Well ID	Well Name	Age
22	NOR-017	
23	NOR-021	
24	NOR-023	
25	NOR-022	
26	NOR-009	
60	NOR-001	
62	NOR-003	
63	NOR-020	
345	NOR-005	
346	NOR-008	
347	NOR-012	

Row 7 of 34

DMS

Find a Well by Selecting

Water Purveyor: ARCADE WD (PDW)
ARDEN-CORDOVA (PUC)
CARMICHAEL WATER DISTRICT
CITIZENS (N. AMER. RIVER)
CITIZENS (S. AMER. RIVER)
CITRUS HEIGHTS I.R. (PwD)

and Well: 2 ARC-016
45 ARC-041
46 ARC-043
51 ARC-040
52 ARC-007
53 ARC-036
54 ARC-010
55 ARC-038

Or Search By: Keyword DMS Well ID

Goto IGSM... OK Cancel

22

Read and Write Pass 1 Input Files

GWDMS
Database Edit Print Model Options Window Help

DMS Purveyors
DMS Model

IGSM Template File Compiler

Part 1 File: C:\igsm\WESTSM\IGSM\W\ws.in1 *.in1
Part 2 File: C:\igsm\WESTSM\IGSM\W\sm.in2 *.in2
Concurrent Part 2 File: C:\igsm\WESTSM\IGSM\W\sc.in2 *.in2

Create Database

004/ 4: binary output for pass 2::wsout1.bin	002/ 2: final head output file::wsin69.da
005/ 5: CONTROL INPUT FILE::WS.IN1	003/ 3: BINARY OUTPUT FOR WATER
006/ 6: STANDARD OUTPUT FILE::WSD	004/ 4: BINARY INPUT GENERATED
007/ 7: ELEMENT CONFIGURATION FILE	005/ 5: CONTROL INPUT FILE::wsm.lt
008/ 8: NODE X-Y COORDINATE FILE (IN	006/ 6: STANDARD OUTPUT FILE::w
009/ 9: STRATIGRAPHIC DATA FILE (IN	007/ 7: PARAMETER DATA FILE::wsF
010/10: STREAM GEOMETRIC DATA FIL	008/ 8: BOUNDARY CONDITION DAT
011/11: LAKE DATA FILE (INPUT):	009/ 9: DIVERSION SPECIFICATION F
012/12: WELL DATA FILE (INPUT):	010/10: LOCATIONS FOR GW TABLE
013/13: ELEMENT CHARACTERISTIC DA	011/11: INITIAL CONDITION DATA FI

Extract Part 1 Data Extract Part 2 Data
Write Part 1 Data Write Part 2 Data

```

insertcomment
runvariable
fld_part1heading1--      westsim model
runvariable
fld_part1heading2--      WESTERN SAN JOAQUIN VALLEY, CALIFORNIA
runvariable
fld_part1heading3--      PART 1
set
fld_alternative--original
insertcomment
liststart
fld_filegroup--1
fld_filenum--4
fld_filename--wsout1.bin
fld_filedescription--/ 4: binary output for pass 2
fld_filegroup--1
fld_filenum--5
    
```

Part1_Template.txt - Notepad

```

File Edit Format Help
Begin group1

Insertcomment
Runvariable PART1HEADING1
Runvariable PART1HEADING2
Runvariable PART1HEADING3

Set modcontrol.alternative=original
Insertcomment

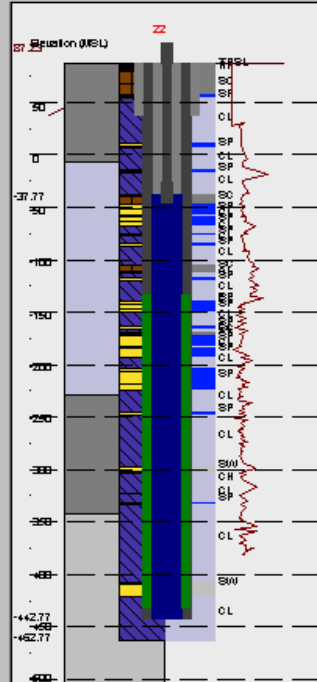
Liststart 4 to 13
  Tableset inputoutputfiles = append
  inputoutputfiles.filegroup = 1
  Columnselect 1-25, inputoutputfiles.filename, 25-100, input
  Format "          #####"
  inputoutputfiles.filenum = Listcntr
Listend

Insertcomment
Runvariable PART1KOUT
Runvariable PART1KDEB

Insertcomment
Runvariable PART1KUNIN
Runvariable PART1KUNOUT

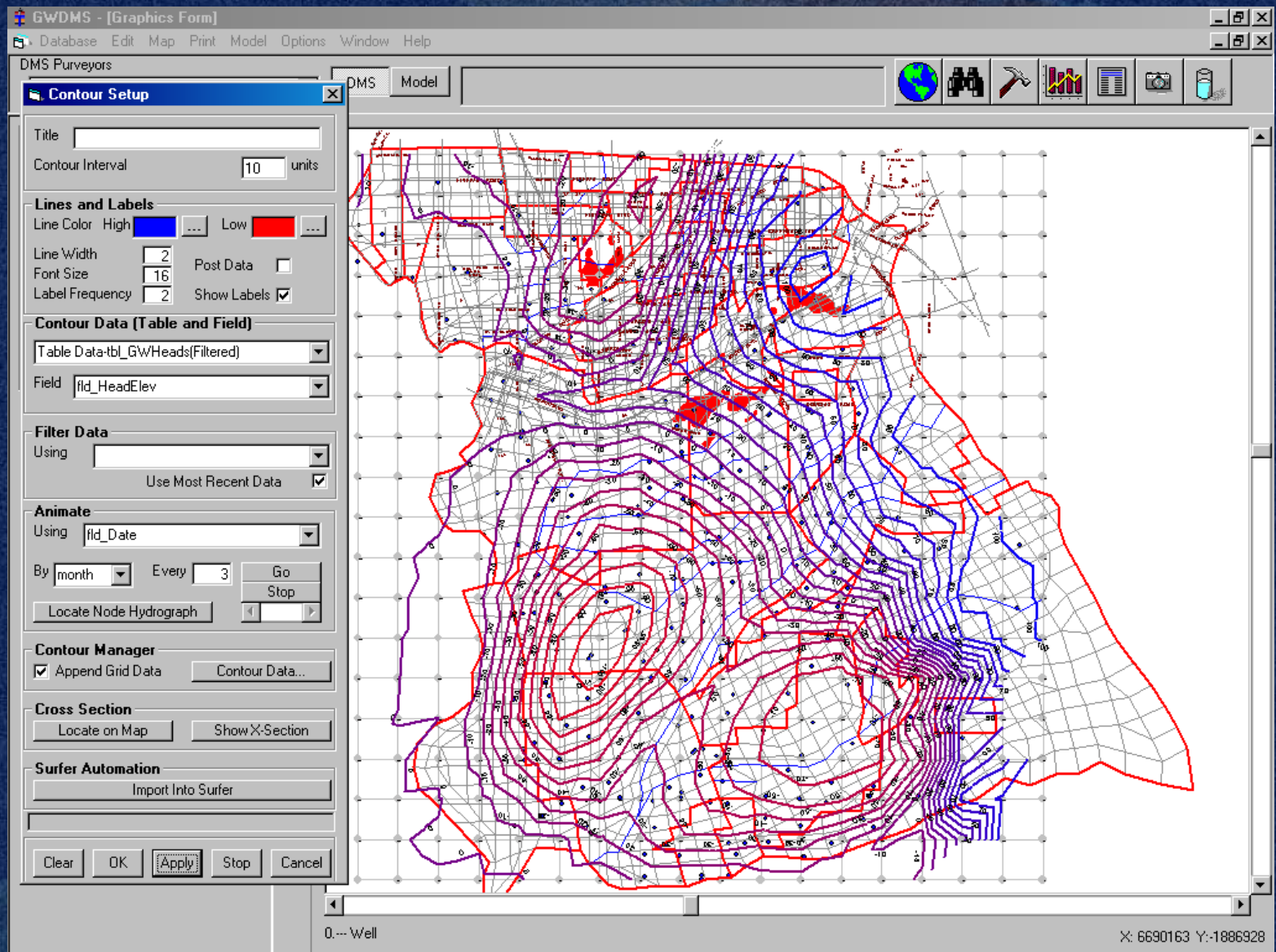
Insertcomment
End

*****
Begin group1file7 'element
Insertcomment
Controlvariable NUMOFELEM
Insertcomment
Liststart NUMOFELEM
    
```

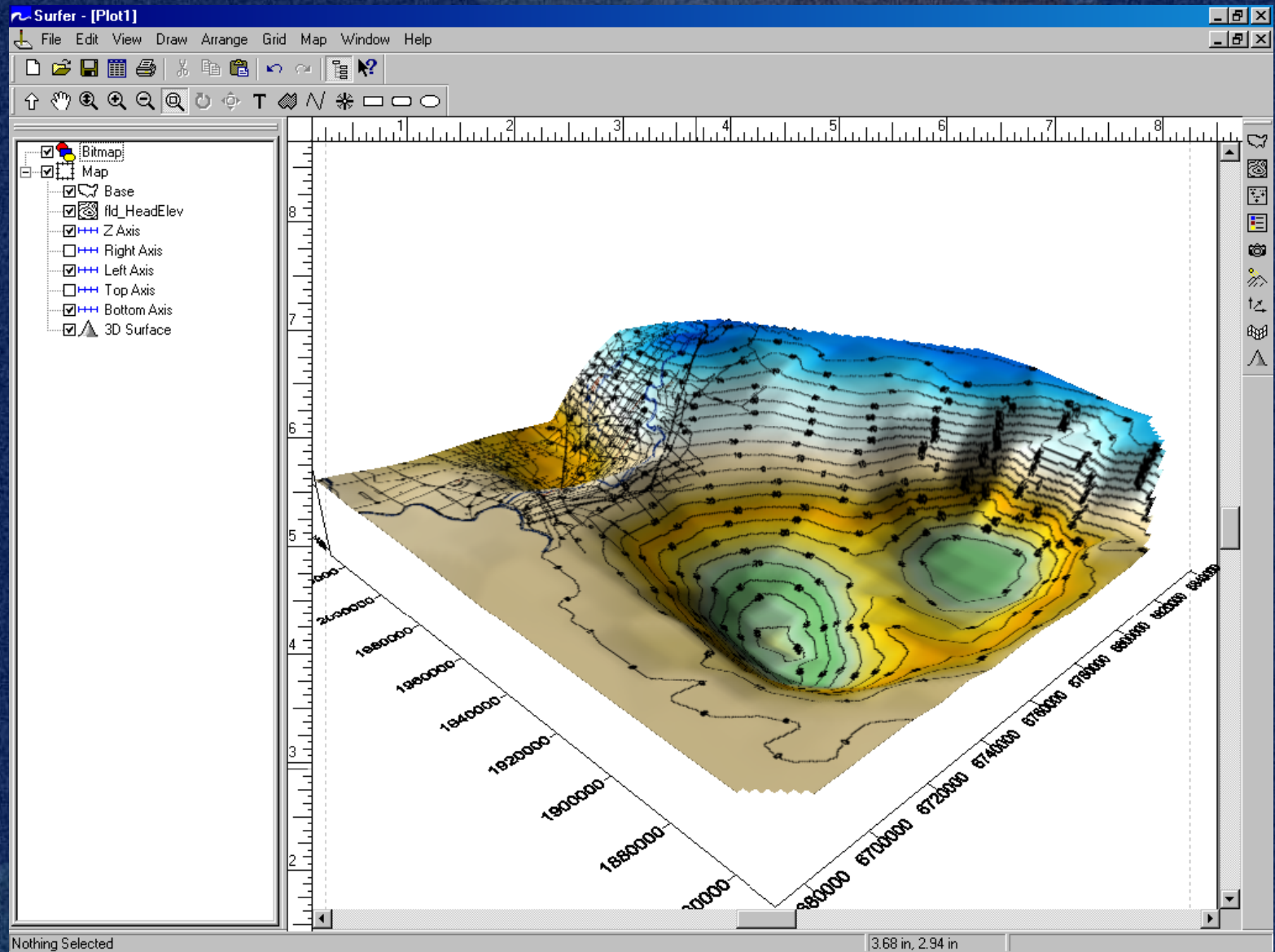



The screenshot shows the GWDMS - [Graphics Form] application. The interface includes a menu bar (File, Database, Edit, Map, Print, Model, Options, Window, Help) and a toolbar with icons for DMS Purveyors, Well ID, State Well ID, and various map tools. The main display area shows a map of the Northridge Water District with a grid overlay. A vertical profile view on the left shows elevation (MSL) from -400 to 50. The status bar at the bottom displays '0... Well' and coordinates 'X: 6731922 Y: 1924696'.

Graphical Output



Surfer Automation



Remaining Steps...

- ✓ Provide Graphical Outputs
 - ✓ Hydrographs
 - ✓ Water Budgets and Time Series Data
- ✓ Show Comparative Results
 - ✓ Calibration Tools to Compare Historical and Model Results
 - ✓ Alternative Comparisons
- ✓ Read and Write Pass 2 Input Files
- ✓ Run Model